



PTO/SB/08a (08-03)

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(file as many sheets as necessary)</i>		<b>Complete if Known</b>			
		Application Number	10/715,348		
		Filing Date	November 14, 2003		
		First Named Inventor	RAMACHANDRAN, JANAKIRAMAN		
		Art Unit	1645		
Sheet	1	of	3	Examiner Name	Not yet assigned
				Attorney Docket Number	GANG-008

U.S. PATENT DOCUMENTS						
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)					

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EE		Amann et al. "Vectors bearing a hybrid <i>trp-lac</i> promoter useful for regulated expression of cloned genes in <i>Escherichia coli</i> ", (1983) Gene 25: 167-1782	
		Amann et al. "Tightly regulated <i>lac</i> promoter vectors useful for the expression of unfused and fused proteins in <i>Escherichia coli</i> ", (1988) Gene, 69, 301-315	
		Bloemberg et al. "Green fluorescent protein as a marker for <i>pseudomonas</i> spp", (1997), Appl.Environ.Microbiol., 4443-45514	
		Chamberlin M. et al., "New RNA polymerase from <i>escherichia coli</i> infected with bacteriophage T7", (1970) Nature (London), 228, 227	
		Chamberlin et al. "Characterization of T7-specific ribonucleic acid polymrase", (1973) J. Biol. Chem., 248, 2235	
EE		Davanloo et al. "Cloning and expression of the gene for bacteriophage T7 RNA polymerase", (1984) Proc. Natl. Acad. Sci, 81, 2035-2039	

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22		Golomb et al. "Characterization of T7-specific ribonucleic acid polymerase", (1974) J. Biol. Chem., 249, 2858	
		Guzman et al. "Tight regulation modulation, and high-level expression by vectors containing the arabinose PBAD promoter", (1992) J. Bacteriol. 177, 4121-4130	
		Haldimann et al. "Use of new methods for construction of tightly regulated arabinose and rhamnose promoter fusions in studies of the <i>Escherichia coli</i> phosphate regulon", (1998) J. Bacteriol. 180, 1277-1286	
		Han et al. "Lipopolysaccharide (LPS) binding protein, truncated at Ile-197, binds LPS but does not transfer LPS to CD14", (1994) J. Biol. Chem., 269(11), 8172-8175	
		Hitchcock et al. "Lipopolysaccharide nomenclature-past, present, and future", (1986) J. Bacteriol., 166, 699-705	
		Ing-Nang Wang et al. "Holins: the protein clocks of bacteriophage infections", (2000) Annu. Rev. Microbiol., 54, 799-825	
		Luria et al. "Chromatin staining of bacteria during bacteriophage infection", (1950) J. Bacteriol., 59, 551-560	
		Martin et al. "Functional analysis of the two-gene lysis system of the Pneumococcal phage Cp-1 in homologous and heterologous host cells", (1998) J. Bacteriol., 180, 210-217	
		Murray et al. "cytological changes in <i>Escherichia coli</i> produced by infection with phage T2", (1950) J. Bacteriol., 59, 603-615	
		Schumann et al. "Structure and function of lipopolysaccharide binding protein", (1990) Science, 249, 1429	
22		Sherry et al. "Cachectin/tumor necrosis factor exerts endocrine, paracrine, and autocrine control of inflammatory responses", (1988) J. Cell Biol., 107, 1269	

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122	Studier et al. "Use of bacteriophage T7 RNA polymerase to direct selective high-level expression of cloned genes", (1986) J. Mol. Biol., 189, 113-130	
1	Studier et al. "Use of T7 RNA polymerase to direct expression of cloned genes", (1990) Methods in Enzymology, 185, 60-63	
8	Young et al. "Bacteriophage lysis: mechanism and regulation", (1992) Microbiol. Rev., 56, 430-481	
122	Young et al. "Phages will out: strategies of host cell lysis", (2000) Trends Microbiol., 8, 120-128	

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RE		Cort et al. "Endotoxin-induced abortion in early pregnant gilts and its prevention by flunixin meglumine", (1980) Acta Veterinaria Scandinavica, 31, 347-358	
		Culbertson et al. "The biologic effects of bacterial endotoxin: a short review", (1980) Veterinary Scientific Communications, 4, 3-14	
		Dunn et al. "Complete nucleotide sequence of bacteriophage T7 DNA and the locations of T7 genetic elements", (1983) J. Mol. Biol., 166, 477	
		Hussaini et al. "Studies of Escherichia coli vaccines: estimation of endotoxins in veterinary vaccines", (1981) Vet. Res. Comm., 5, 171-175	
		Wright et al. "CD14, a receptor for complexes of lipopolysaccharide (LPS) and LPS binding protein", (1990) Science, 249, 1431	
RE		Young et al. "Holins: form and function in bacteriophage lysis", (1995) FEMS Microbiol. Rev., 17, 191-205	

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OTHER PRIOR ART—NON PATENT LITERATURE DOCUMENTS			
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RE	C1	Ackermann, "Tailed bacteriophages: the order caudovirales," <i>Adv Virus Res</i> , 51:135-201. (1998)	
	C2	Arendt et al., Molecular Characterization of Lactorcoccal Bacteriophage Tuc2009 and Identification and Analysis of Genes Encoding Lysin, a Putative Holin, and Two Structural Proteins," <i>Applied and Environment Microbiology</i> , June 1994, p. 1875-1883, vol. 60, No. 6.	
	C3	Auad et al., "Physical mapping and partial genetic characterization of the Lactobacillus delbrueckii subsp. bulgaricus bacteriophage Ib539," <i>Arch Virol</i> , 144: 1503-1512. (1999)	
	C4	Bernhardt, et al., "Genetic Evidence that the Bacteriophage OX174 Lysis Protein Inhibits Cell Wall Synthesis" <i>Proc. Natl. Acad Sci.</i> Vol. 97, No. 8, Pages 4297-4302 (April 2000).	
	C5	Boizet et al., "Cloning, expression and sequence analysis of an endolysin-encoding gene of Lactobacillus bulgaricus bacteriophage mv1." <i>Gene</i> , 94: 61-67 (1990)	
	C6	Botstein et al., "Strategies and Applications of in Vitro Mutagenesis," <i>Science</i> 229, Vol. 229, pg. 1193-1201, Number 4719 (1985)	
	C7	Calandra et al., "Cellular streptolysin S-related hemolysins of group A Streptococcus C203S," <i>Infect Immun</i> , 12: 13-28. (1975)	
	C8	Calandra et al., "Lysis and protoplast formation of group B streptococci by mutanolysin," <i>Infect Immun</i> , 28: 1033-1037 (1980)	
	C9	Caldentey et al., The Lytic Enzyme of the Pseudomonas Phage Φ6. Purification and Biochemical Characterization," <i>Biochimica et Biophysica Acta</i> , 1159, 44-50 (1992)	
	C10	Cattozzo et al., "Expression and Immunogenicity of V <sub>3</sub> Loop Epitopes of HIV-1, Isolates SC and WMJ2, Inserted in Salmonella Flagellin," <i>Journal Biotechnology</i> 56 (1997) 191-203	
	C11	Chalfie et al., "Green Fluorescent Protein as a Marker for Gene Expression," <i>Science</i> , Vol. 263, 802-805 1994	
	C12	Chandry et al., "Analysis of the DNA sequence, gene expression, origin of replication and modular structure of the Lactococcus lactis lytic bacteriophage sk1," <i>Mol Microbiol</i> , 26: 49-64 (1997)	
RE	C13	Cohen et al., "Simple procedure for production by group C streptococci of phage- associated lysin active against group A streptococci," <i>Appl Microbiol</i> , 29: 175-178 (1975)	

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22	C14	Cole et al., "The EBV-hybridoma technique and its application to human lung cancer," Monoclonal Antibodies And Cancer Therapy, Alan R. Liss, Inc., pp. 77-96 (1985)
	C15	Cote et al., "Generation of human monoclonal antibodies reactive with cellular antigens," Proc. Natl. Acad. Sci. USA 80: 2026-2030 (1983)
	C16	Coleman et al., "Cloning and expression in Escherichia coli and Staphylococcus aureus of the beta-lysin determinant from Staphylococcus aureus: evidence that bacteriophage conversion of beta-lysin activity is caused by insertional inactivation of the beta-lysin determinant," Microb Pathog, 1: 549-564 (1986)
	C17	Coleman et al., "Staphylococcus aureus bacteriophages mediating the simultaneous lysogenic conversion of beta-lysin, staphylokinase and enterotoxin A: molecular mechanism of triple conversion. J Gen Microbiol, 135:
	C18	Cooney et al., "Molecular cloning and genetic analysis of the determinant for gamma-lysin, a two-component toxin of Staphylococcus aureus," J Gen Microbiol, 134:2179-2188 (1988)
	C19	Cormack, et al., "FACS-optimized mutants of the green fluorescent protein (GFP)," Gene, 173, 33-38 (1996)
	C20	de Ruyter et al., "Food-grade controlled lysis of Lactococcus lactis for accelerated cheese ripening," Nat Biotechnol, 15: 976-979 (1997)
	C21	Devine, et al., "EcoRI Cleavage Sites in the argECBHRegion of the Escherichia coli", Chromosome J. Bacteriology, 1977. 129(2): 1072-1077.
	C22	Diaz et al., "The two-step lysis system of pneumococcal bacteriophage EJ-1 is functional in gram-negative bacteria: triggering of the major pneumococcal autolysin in Escherichia coli," Mol Microbiol, 19: 667-681
	C23	Dietrich et al., "Delivery of antigen-encoding plasmid DNA into the cytosol of macrophages by attenuated suicide Listeria monocytogenes," Nat Biotechnol, 16: 181-185 (1998)
	C24	Elias et al., "Staphylococcus aureus haemolysins: their use in strain typing," Acta Microbiol Acad Sci Hung, 27: 183-190 (1980)
	C25	Fischetti et al., "Purification and physical properties of group C streptococcal phage-associated lysine," J Exp Med, 133: 1105-1117 (1971)
	C26	Gaeng et al., "Gene cloning and expression and secretion of listeria monocytogenes bacteriophage-lytic enzymes in lactococcus lactis," Appl. Environ. Microbiol. 66, 2951 (2000)
	C27	Garcia et al., "Biochemical characterization of a murein hydrolase induced by bacteriophage Dp-1 in Streptococcus pneumoniae: comparative study between bacteriophage-associated lysin and the host amidase," J
22	C28	Garcia et al., "Cloning, purification, and biochemical characterization of the pneumococcal bacteriophage Cp-1 lysin," J Virol, 61: 2573-2580 (1987)
	C29	Garcia et al., "Mechanism of phage-induced lysis in pneumococci." J Gen Microbiol, 129: 479-487. (1983)

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22	C30	Garrett, "Cell Lysis by induction of cloned lambda lysis genes," J. et al. Mol. Gen. Genet. 182, 326 (1981)
	C31	Garvey et al., "Nucleotide sequence of bacillus phage Φ29 genes 14 and 15: homology of gene 15 with other phage lysozymes," Nucleic Acids Res. 14, 10001 (1986)
	C32	Gindreau et al., "Molecular analysis of the region encoding the lytic system from Oenococcus oeni temperate bacteriophage phi 10MC," FEMS Microbiol Lett, 171: 231-238 (1999)
	C33	Henikoff, "Unidirectional digestion with exonuclease III creates targeted breakpoints for DNA sequencing," Gene 28, 351 (1984)
	C34	Henrich et al., "Primary structure and functional analysis of the lysis genes of Lactobacillus gasseri bacteriophage phi adh," J Bacteriol, 177: 723-732 (1995)
	C35	Higuchi et al., "A general method of in vitro preparation and specific mutagenesis of DNA fragments: study of protein and DNA interactions," Nucleic Acids Res. 16, 7351 (1988)
	C36	Hill et al., "Identification of a lysin associated with a bacteriophage (A25) virulent for group A streptococci. J Bacteriol, 145: 696-703 (1981)
	C37	Inouye et al., "Bacteriophage T7 lysozyme is an n-acetylmuramyl-L-alanine amidase" Biol.Chem. 248, 7247 (1973)
	C38	Jain et al., "Use of lambda phage s and r gene products in an inducible lysis system for vibrio cholerae- and salmonella enterica serovar typhimurium-based DNA vaccine delivery systems," Infect Immun, 68, 986 (2000)
	C39	Jerne, "Towards a network theory of the immune system," Ann. Immunol. (Paris) 125c:373-389 (1974)
	C40	Jerne, N. K., et al., "Recurrent idiotopes and internal images," EMBO 1:234 (1982)
	C41	Kaneko et al., "Complete nucleotide sequence and molecular characterization of the temperate staphylococcal bacteriophage phiPVL carrying Pantone-Valentine leukocidin genes," Gene, 215:57-67 (1998)
	C42	Kohler et al., "Continuous cultures of fused cells secreting antibody of predefined specificity," Nature 256, 495-497 (1975)
	C43	Kosbor et al., "The production of monoclonal antibodies from human lymphocytes," Immunology Today 4, 72 (1983)
	C44	Kuhnemund, "Studies on the lysis of streptococcus pyogenes (group A, type 1) by phage-associated lysin (author's transl)" Z Immunitätsforsch Exp Klin Immunol, 143:184-191 (1972) <i>Abstract only</i>
✓	C45	Loessner et al., "Heterogeneous endolysins in Listeria monocytogenes bacteriophages: a new class of enzymes and evidence for conserved holin genes within the siphoviral lysis cassettes," Mol Microbiol, 16: 1231-1241
22	C46	Loessner et al., "Modified Listeria bacteriophage lysin genes (ply) allow efficient overexpression and one-step purification of biochemically active fusion proteins," Appl Environ Microbiol, 62: 3057-3060 (1996)

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		Filing Date	November 14, 2003
		Confirmation Number	2395
		First Named Inventor	RAMACHANDRAN, JANAKIRAMAN
		Art Unit	1645
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✓	C47	Mermod et al., "Vector for regulated expression of cloned genes in a wide range of gram-negative bacteria," <i>J. Bacteriol.</i> 167, 447(1986)
	C48	Mindich et al., "Cell wall lysin as a component of the bacteriophage phi 6 virion," <i>J Virol</i> , 30: 489-496 (1979)
	C49	Mullan et al., "Lysin production by phi C2(W), a prolate phage for <i>Streptococcus lactis</i> C2," <i>J Dairy Res</i> , 52: 113-121 (1985)
	C50	Mullan et al., "Partial purification and some properties of phi C2(W) lysin, a lytic enzyme produced by phage-infected cells of <i>Streptococcus lactis</i> C2," <i>J Dairy Res</i> , 52:123-138 (1985)
	C51	Nelson et al., "Prevention and elimination of upper respiratory colonization of mice by group A streptococci by using a bacteriophage lytic enzyme," <i>Proc Natl Acad Sci U S A</i> , 98: 4107-4112 (2001)
	C52	Newton et al., "Expression and immunogenicity of an 18-residue epitope of HIV1 gp41 inserted in the flagellar protein of a salmonella live vaccine," <i>Res. Microbiol.</i> 146, 203-216 (1995)
	C53	Newton et al., "Immune response to cholera toxin epitope inserted in salmonella flagellin," <i>Science</i> 244, 70 (1989)
	C54	Norby, E., Summary, in <i>Vaccines 85</i> , Lerner, R. A., R. M. Chanock, and F. Brown (eds.), Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., pp. 388-389 (1985)
	C55	Oki et al., "Cloning, sequence analysis, and expression of the genes encoding lytic functions of Bacteriophage phi gle," <i>Gene</i> , 176: 215-223 (1996)
	C56	Owen et al., "Nucleotide sequence of the lysozyme gene of bacteriophage T4 - analysis of mutations involving repeated sequences," <i>J. Mol. Biol.</i> 165, 229 (1983) Schmidt et al. <i>J. Bacteriol.</i> 178, 1099 (1983)
	C57	Payne et al., "Exploitation of a chromosomally integrated lactose operon for controlled gene expression in <i>Lactococcus lactis</i> ," <i>FEMS Microbiol Lett</i> , 136: 19-24 (1996)
	C58	Raina, "Purification of <i>Streptococcus</i> group C bacteriophage lysine," <i>J Bacteriol</i> , 145: 661-663 (1981)
	C59	Rennell et al., "Phage P22 lysis genes: nucleotide sequences and functional relationships with T4 and $\lambda$ genes," <i>Virol.</i> 143, 280 (1985)
	C60	Rosenberg, et al., "Regulatory sequences involved in the promotion and termination of RNA transcription," <i>Ann. Rev. Genet.</i> 13, 319-53 (1979)
✓	C61	Sable et al., "The lysins of bacteriophages infecting lactic acid bacteria," <i>Appl Microbiol Biotechnol</i> , 43: 1-6 (1995)
✓	C62	Sanders et al., "A chloride-inducible gene expression cassette and its use in induced lysis of <i>Lactococcus lactis</i> . <i>Appl Environ Microbiol</i> ," vol. 63, no. 12, 4877-4882 (1997)

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		First Named Inventor	RAMACHANDRAN, JANAKIRAMAN
		Art Unit	1645
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R2	C63	Schmidt et al., "Three functions of bacteriophage p1 involved in cell lysis," J. Bacteriol., vol. 178, no. 4, 1099-1104 (1996)
	C64	Shearman et al., "Cloning and DNA sequence analysis of a Lactococcus bacteriophage lysin gene," <i>Mol Gen Genet</i> , 218: 214-221 (1989)
	C65	Shearman et al., "Controlled expression and structural organization of a Lactococcus lactis bacteriophage lysin encoded by two overlapping genes," <i>Appl Environ Microbiol</i> , 60: 3063-3073 (1994)
	C66	Sheehan et al., "Analysis of the catalytic domain of the lysin of the lactococcal bacteriophage Tuc2009 by chimeric gene assembling," <i>FEMS Microbiol Lett</i> , 140: 23-28 (1996)
	C67	Sheehan et al., "The lytic enzyme of the pneumococcal phage Dp-1: a chimeric lysin of intergeneric origin," <i>Mol Microbiol</i> , 25: 717-725 (1997)
	C68	Sheehan et al., "Identification and characterization of a lysis module present in a large proportion of bacteriophages infecting <i>Streptococcus thermophilus</i> ," <i>Appl Environ Microbiol</i> , 65: 569-577 (1999)
	C69	Shortle et al., "Gap misrepair mutagenesis: efficient site-directed induction of transition, transversion, and frameshift mutations in vitro," <i>Proc.Natl.Acad.Sci.USA</i> 79, 1588 (1982)
	C70	Singer, "Determination of the amount of homology required for recombination in bacteriophage T4," <i>Cell</i> , 31: 25-33 (1982)
	C71	Smith, "In vitro mutagenesis," <i>Ann. Rev. Genet.</i> 19, 423-462 (1985)
	C72	Sonstein et al., "Staphylococcal bacteriophage-associated lysin: a lytic agent active against <i>Staphylococcus aureus</i> ," <i>J Bacteriol</i> , 107: 499-504. (1971)
	C73	Spicer and Konigsberg in <i>Bacteriophage T4</i> eds. Mathews, Kutter, Mosig and Berget, American Society for Microbiology, Washington, DC, 1983, pp. 299
	C74	Stocker et al., "Immune responses to epitopes inserted in salmonella flagellin," <i>Int. Rev. Immunol.</i> 11, 167 (1994)
	C75	Stocker, "Aromatic-dependent salmonella as live vaccine presenters of foreign epitopes as inserts in flagellin," <i>Res. Microbiol.</i> 141, 787-796 (1990)
	C76	Streisinger et al., "Mutations affecting the lysozyme of phage T4," <i>Cold Spring Harbor Symp. Quant. Biol.</i> 26, 25-30 (1961)
	C77	Tourville et al., "Lactic streptococcal phage-associated lysin. I. Lysis of heterologous lactic streptococci by a phage-induced lysin," <i>J Dairy Sci</i> , 49: 158-162 (1966)
g	C78	Tsugita et al., "Purification of bacteriophage T4 lysozyme" <i>J. Biol. Chem.</i> 243, 391 (1968)
R2	C79	Vallette et al., "Construction of mutant and chimeric genes using the polymerase chain reaction," <i>Nucleic Acids Res.</i> 17, 723 (1989)

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		First Named Inventor	RAMACHANDRAN, JANAKIRAMAN		
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				Attorney Docket Number	GANG-008

R2	C80	van der Vijver et al., "Induction of mutation in <i>Staphylococcus aureus</i> by ethylmethane sulphonate." <i>J Med Microbiol</i> , 8: 265-277 (1975)
	C81	van Sinderen et al., "Sequence analysis and molecular characterization of the temperate lactococcal bacteriophage $\phi$ lt." <i>Mol Microbiol</i> , 19: 1343-1355 (1996)
	C82	Volker et al., "Induction of mutations in specific genes of bacteriophage T4 using cloned restriction fragments and marker rescue. <i>Mol. Gen. Genet.</i> 177, 447 (1980)
	C83	Wang et al., "Holins: The protein clocks of bacteriophage infections," <i>Ann. Rev. Microbiol.</i> 54, 799-825 (2000)
	C84	Ward et al., "Sequence analysis of the lysin gene region of the prolate lactococcal bacteriophage $\phi$ c2," <i>Can J Microbiol</i> , 39: 767-774 (1993)
	C85	Wheeler et al., "Production of group C streptococcus phage-associated lysin and the preparation of <i>Streptococcus pyogenes</i> protoplast membranes." <i>J Gen Microbiol</i> , 120:27-33 (1980)
	C86	Wilson, I. A., et al., "The structure of an antigenic determinant in a protein," <i>Cell</i> 37:767 (1984)
	C87	Yoon et al., "Characterization of a lytic <i>Lactobacillus plantarum</i> bacteriophage and molecular cloning of a lysin gene in <i>Escherichia coli</i> ," <i>Int J Food Microbiol</i> , 65: 63-74. (2001)
	C88	Zhao et al., "Polymerase chain reaction-based point mutagenesis protocol," <i>Methods Enzymol.</i> 217, 218 (1993)
	C89	Ziermann et al., "Functions involved in bacteriophage P2-induced host cell lysis and identification of a new tail gene," <i>J. Bacteriol.</i> vol. 176, no. 16, 4974 (1994)
	C90	Abul-Hassan et al., "Bacteriophage Therapy of <i>Pseudomonas</i> Burn Wound Sepsis," <i>Annals of the MBC</i> - vol. 3-n'4 - December 1990, pgs 1-4, April 8, 2003
	C91	Barrow et al., "Use of Lytic Bacteriophage for Control of Experimental <i>Escherichia coli</i> Septicemia and Meningitis in Chickens and Calves," <i>Clinical and Diagnostic Laboratory Immunology</i> , vol. 5, no. 3,
	C92	Biswas, et al., "Bacteriophage Therapy Rescues Mice Bacteremic from a Clinical Isolate of Vancomycin-Resistant <i>Enterococcus Faecium</i> ," <i>Infection and Immunity</i> , vol. 70, no. 1, pgs. 204-210, Jan. 2002
	C93	Lee et al. "Potential of bacteriophage application as an intervention strategy against <i>Salmonella</i> in pigs", available on the internet as of 2002 at <a href="http://www.extension.iastate.edu/ipic/reports/02swinereports/asl-1810.pdf">www.extension.iastate.edu/ipic/reports/02swinereports/asl-1810.pdf</a>
	C94	Longchamp, et al., "Genetic control and mechanism of celi Lysis by defective bacteriophages of <i>Bacillus subtilis</i> ", Abstract of the 96 <sup>th</sup> Gen. Meet. Of Amer. Soc. For Microbiol. May 19-23 pg. 576. (Abstract M-16)
R2	C95	Matsuzaki et al., "Experimental Protection of Mice Against Lethal <i>Staphylococcus aureus</i> Infection by Novel Bacteriophage $\phi$ MR11," <i>J. Infect Dis.</i> , 2003:187 (15 Feb) pgs. 613-624.

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		Art Unit	1845
(use as many sheets as necessary)		Attorney Docket Number	GANG-008
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R2	C96	Ramesh, et al., "Prevention of <i>Clostridium difficile</i> - induced ileocectitis with Bacteriophage," Anaerobe (1999) 5:69-78.	
	C97	Smith, et al., "Successful Treatment of Experimental <i>Escherichia coli</i> Infections in Mice Using Phage: its General Superiority Over Antibiotics, Journal of General Microbiology (1982)Feb., 128, 307-318.	
	C98	Smith, "Effectiveness of Phages in Treating Experimental <i>Escherichia coli</i> Diarrhoea in Calves, Piglets and Lambs," J. Gen Microbiol (1993) Aug;129 (Pt 8):2659-2675	
	C99	Smith, et al., "The Control of Experimental <i>Escherichia coli</i> Diarrhoea in Calves by Means of Bacteriophages," J. Gen Microbiol (May 1987); 133 (Pt 5): 1111-1126	
	C100	Gründling et al. "Holins Kill without warning", (2001) Proc Natl Acad Sci U S A. 2001 Jul 31;98(16):9348-52.	
	C101	Gründling et al. "Genetic and Biochemical Analysis of Dimer and Oligomer Interactions of the $\lambda$ S Holin", J. Bacteriol. Nov. 2000 182(21): 6082-6090.	
	C102	Xu et al. "A signal-arrest-release sequence mediates export and control of the phage P1 endolysin", (2004) Proc Natl Acad Sci U S A. 101(17):6415-20.	
R2	C103	The American Heritage Dictionary of the English Language. 4 <sup>th</sup> edition. 2000. entry "incapacitated".	
	C104		

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